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### **REMARKS/ARGUMENTS**

The specification has been amended to remove two paragraphs which contain potentially erroneous material only identified by the inventor subsequent to the filing of the application. Claims 1, 2, 3, and 18 have been amended to more clearly define the invention claimed by the applicant. Claim 6 has been amended to correct a clerical error in the text.

The examiner has rejected claims 1-3 and 18-20 under 35 USC 112, second paragraph. Applicant has amended the claims to clarify translation discrepancies, correct clerical errors and more clearly define the invention claimed by the applicant.

The Cellular Information Theory is a novel theory developed by the applicant, Dr. Tosiyasu L. Kunii. Dr. Kunii is an IEEE Fellow and has published numerous papers in peer-reviewed journals and conferences. This novel theoretical background has led the Applicant to the development of the cellular information model. The cellular information model is an application of the cellular information theory to specific technical problems as described in the current application and as claimed in the amended claims.

Applicant submits that the current amendments overcome the rejection under 35 USC 112, second paragraph and that claims 1-3 and 18-20 are now in condition for allowance.

The examiner has rejected claims 1, 3-20 under 35 USC 103(a) as being unpatentable over Dunphy (US Patent No. 6,484,182).

In particular, the examiner has indicated (Page 3, second paragraph) that Dunphy does not teach the use of a technique of cellular information theory but that cellular information theory is well known in the art and it would have been obvious to one of ordinary skill in the art at the time the invention was made. The examiner has provided no evidence that cellular information theory was well known in the art at the time the invention was made. Applicant submits that the applicant is one

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of the leading developers of the cellular information theory and that such a novel theory could not have been known to one of ordinary skill in the art at the time of invention, particularly in the patent sense of having an understanding sufficient to reduce the invention to practice. Further, Applicant submits that the cellular information model, which is based on cellular information theory, described in the present application was not known.

Accordingly, applicant submits that it would not have been obvious to one of ordinary skill in the art to employ cellular information theory or a cellular information model in combination with Dunphy or otherwise.

The cellular information model can be contrasted with the known relational database model. A relational database model is based on a "world model" which assumes the presence of a manager who manages interdependent relations among all the data or attributes in a uniform manner. In the world model it is assumed that the manager follows and recognizes the overall interdependencies among the data. As such, it is difficult for a world model-based relational database to manage data on the WEB where interdependencies among the data are changing frequently and rapidly.

The Cellular Information Theory and the cellular information model based thereon are propounded by the applicant for overcoming the drawbacks of the world model-based relational database model (see, for example, page 2, lines 9 to 24 of the present specification). The cellular information model is intended to allow persons, including natural humans, legal entities and so forth, to easily acquire information which is targeted for their needs (i.e. from their viewpoint) from the Internet or World Wide Web.

In this particular case, Dunphy describes a technology based on a relational database (see, for example, Column 3, lines 2 and 3). On the other hand, as described above, the cellular information model is a novel technology for overcoming drawbacks in the relational database model by allowing attributes to be selected based on the viewpoint of a subject rather than based on the database manager. Thus, applicant submits that Dunphy and the present application are in different

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technological areas that, prior to the present application, there would have been no suggestion to combine.

Further, the examiner indicates (see page 2, paragraph 4) that correspondence relations between attributes determined by respective viewpoints of a plurality of subjects as variously claimed in the present application are taught by Dunphy referring to col. 6, lines 8-25 and col. 3, lines 5-21. However, Applicant submits that col. 6, lines 8-25 of Dunphy merely discloses predetermined data formats to be stored in a relational database and col. 3, lines 5-21 relates only to a user interface for the relational database, such as a data entry tool.

Applicant submits that Dunphy does not teach or suggest that attributes (for example, price of a product, offering price thereof, and the like) related to a transaction be determined in relation to the viewpoint of the subject (for example, business entity such as a shop or a customer in e-business). As the applicant has disclosed in the specification (see page 4, lines 2 to 7), the cellular information model allows the "respective viewpoint" of a subject to be used to select a group or set of attributes chosen from all the attributes related to a transaction. For example, from the e-customer's viewpoint an attribute such as price might be more important than other attributes. As such, Dunphy fails to teach or suggest a model or database that makes use of the viewpoints of the subjects.

Still further, Dunphy does not teach or suggest one of the significant effects of the use of viewpoints, which is that, by employing the above described correspondence relationship of attributes obtained from one transaction in other transactions, many repetitive activities and operations that waste both human and computing resources can be reduced.

For the reasons described above, Applicant submits that the rejection made by the examiner under U.S.C. 103(a) based on Dunphy has been overcome and claims 1, 3-20 are in condition for allowance.

The examiner has rejected claim 2 under 35 USC 103(a) as being unpatentable over Dunphy in view of Spiegel (US Patent No. 6,466,918).

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For at least similar reasons to those noted above with respect to claims 1, 3-20, Applicant submits that the combination of Dunphy with Spiegel or other prior art not specified by the examiner neither teaches or suggests the use of a cellular information model as claimed in amended claim 2. Thus, applicant submits that claim 2 is in condition for allowance.

For further information with regard to "Cellular Information Theory" or the cellular information model please refer to following papers written by the applicant subsequent to the filing of the present application:

Tosiyasu L. Kunii, "Algebraic Topological Modeling for Cyberworld Design, Proceedings of International Conference on Cyberworlds, pp. xx-xxvi, 3-5 December 2003, Marina Mandarin Hotel, Singapore, IEEE Computer Society Press, Los Alamitos, California, U.S.A.

Tosiyasu L. Kunii, "Web Information Modeling", Proceedings of the 2nd International Workshop on Databases in Networked Information Systems (DNIS 2002) (December 16-18, 2002, Aizu, Japan), pp. 58-63, Lecture Notes in Computer Science (LNCS), Springer-Verlag, Heidelberg.

Applicant submits that, based on the above remarks/arguments, each of the current independent claims are allowable over Dunphy and/or Spiegel and accordingly the claims dependent thereon are also allowable.

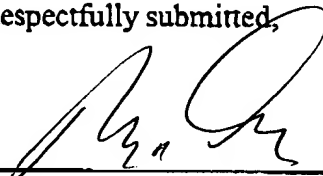
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**Conclusion:**

In view of the foregoing amendments and remarks it is respectfully submitted that this application is in condition for allowance. Favourable consideration and prompt allowance are earnestly solicited.

Respectfully submitted,



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